



August 23, 2021

Mr. Eric Shierman  
Ms. Sarah Hall  
Oregon Public Utilities Commission  
Docket: UM 2165

**Re: UM 2165 – FLO Comments on Workshop #4: Statewide Programs and Initiatives**

Dear Mr. Shierman and Ms. Hall,

Thank you for the opportunity to comment on Oregon Public Utilities Commission's (OPUC) workshop 4 for the UM 2165 docket.

FLO is a leading North American charging network for electric vehicles (EV) and a major provider of smart charging software and equipment. FLO offers public, commercial, and residential chargers, including Level 2 EV supply equipment and DC fast chargers. In North America, FLO has deployed over 45,000 charging stations and manages hundreds of thousands unique charging experiences that transfer 5.5 GWH of energy monthly. FLO's headquarters and network operations are based in Quebec City.

FLO offers the following comments in response to the question below from slide 49 of the workshop presentation.

*Based on the workshop presentations, do you see any gaps in Oregon state agency planning for electric vehicles?*

OPUC has an opportunity to require and track high charging station uptime to ensure a positive consumer charging experience. Oregon Department of Transportation's Transportation Electrification Infrastructure Needs Assessment recommends a process to identify charging station "needs and standards" as it relates to station reliability, among other things (page 42). Any requirements related to uptime will directly affect OPUC and utilities designing station incentive programs. OPUC should consider uptime requirements through the UM 2165 docket as well as its review of transportation electrification plans and utility filings.

**I. FLO recommends OPUC lead a public process to institute firm uptime requirements for charging stations deployed by ratepayer funds.**

Increasing consumer confidence in EVs as accessible and convenient greatly depends on the convenience and accessibility of reliable charging stations. Bad charging experiences

due to a charger being offline can greatly undermine the state’s EV market adoption goals. FLO encourages OPUC to review utility-proposed incentive programs from the perspective of drivers’ needs – one aspect being that high charger uptime is critical to a positive consumer experience. While FLO as a network meets a higher uptime than 97 percent, FLO believes 97 percent uptime, calculated on a 12-month rolling basis, is in line with current industry capabilities and will ensure a high level of service to drivers. There are several examples of higher or mandatory uptime requirements appearing in various programs and recommendations across North America:

- The New York State Energy and Research Development Authority requires 97 percent uptime for its DCFC grant program<sup>1</sup>.
- The Regional Electric Vehicle Plan for the West recommends a 97 percent uptime requirement for charging stations<sup>2</sup>.
- Florida Power & Light requires 98 percent uptime for both Level 2 and DCFC EVSE in an RFP<sup>3</sup>.
- Multiple requests for proposals from private entities require 98 percent uptime for chargers they procure<sup>4</sup>.
- The Northeast States for Coordinated Air Use Management recommends a 99 percent uptime requirement for DCFC EVSE<sup>5</sup>.
- ConEdison’s Make Ready EV Program requires 99 percent uptime for DCFC EVSE<sup>6</sup>.
- Louisville Gas & Electric requires 99 percent uptime for DCFC EVSE<sup>7</sup>.
- Sourcewell, which handles cooperative procurement for public entities, released a request for proposals earlier this year regarding charging stations, and asked respondents to describe any “performance standards or guarantees”, including uptime<sup>8</sup>.
- The City of West Vancouver requires an uptime of “95 percent or better” in its request for proposals for charging stations<sup>9</sup>.

Uptime requirements act as an insurance policy that ensures both a public benefit to drivers and strong stewardship of public dollars. Broken chargers do not provide a public good, and each time a charger goes offline, the return on investment in the charger is diluted. Uptime requirements protect against this outcome.

## **I. FLO recommends adding a reporting requirement on the uptime of charging stations and requiring this for longer than 12 months.**

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<sup>1</sup> NYSERDA PON 4509, Page 11

<sup>2</sup> REV West: Voluntary Minimum Standards. Page 3. [revwest\\_volminimumstandards.pdf \(naseo.org\)](#)

<sup>3</sup> Florida Power & Light. *Electric Vehicle Supply Equipment Request for Proposal: Scope of Work*. 2021. Page 5.

<sup>4</sup> These two RFPs are currently live and are not publicly available, so we are not able to be more specific currently.

<sup>5</sup> Kinsey et. Al. *Building Reliable EV Charging Networks*. Page 6. May 2019.

<sup>6</sup> Consolidated Edison Company of New York, Inc. *Electric Vehicle Infrastructure Make-Ready Program Implementation Plan*. September 2020. Page 7.

<sup>7</sup> Louisville Gas and Electric. *Direct Current Fast charger Project Requirements*. 2021. Page 5.

<sup>8</sup> Sourcewell. *Electric Vehicle Supply Equipment and Related Services*. April 2021. <[Electric Vehicle Supply Equipment and Related Services | Sourcewell \(sourcewell-mn.gov\)](#)>

<sup>9</sup> City of West Vancouver. *Request for Proposals RFP21 012 Electric Vehicle Charging Infrastructure and Management Services*. July 2021. Page 7.

To understand the performance of ratepayer-funded stations, FLO recommends including uptime on a 12-month cycle. We believe this is critical to understanding the performance of the chargers and the overall quality of the utilities' investments in Oregon. Once again, such requirements are also being considered in other jurisdictions:

- California's Zero-Emission Vehicle Market Development Strategy calls out the importance of tracking "charging system resilience" (page 17), and its Energy Commission has committed to "measur[ing] and track[ing] EV charging station reliability and uptime" (page 3)<sup>10</sup>.
- California's legislature requires its Energy Commission to track the downtime of stations funded with money it allocated in budget legislation this past summer.
- Alaska Energy Authority's request for qualifications on charging stations requires charging networks to "monitor station uptime" and provide this data to the agency<sup>11</sup>.

Furthermore, uptime should be reported consistently using a standardized reporting formula. This will ensure reporting of information that more accurately describes the reliability of publicly funded infrastructure, otherwise OPUC could receive inaccurate data that undermines this analysis. FLO has developed a reporting formula and is happy to provide additional technical support<sup>12</sup>. As part of any public process to consider uptime requirements, we also recommend discussing a standardized reporting formula.

Thank you for your consideration,

*[electronically submitted]*

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FLO

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<sup>10</sup> Governor's Office of Business & Economic Development. *California Zero-Emission Vehicle Market Development Strategy*. February 2021. Pages 3 and 17.

<sup>11</sup> Alaska Energy Authority. *RFQ Section 2 EVSE Package Requirements Response Attachment A*. 2021. Pages A6-A7.

<sup>12</sup> For more information on FLO's standardized reliability formula, visit: [Reliability Blog Series #3: Calculating Standardized Charger Uptime \(flo.com\)](#)